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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,050	01/21/2004	Dongning Zhang	81868.0114	3791
26021	7590	10/04/2005		
HOGAN & HARTSON L.L.P. 500 S. GRAND AVENUE SUITE 1900 LOS ANGELES, CA 90071-2611			EXAMINER NGUYEN, HANH N	
			ART UNIT 2834	PAPER NUMBER

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/763,050

Applicant(s)

ZHANG ET AL.

Examiner

Nguyen N. Hanh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 15-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/21/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-14 in the reply filed on 9/12/2005 is acknowledged.

Drawings

2. Figure 9-11 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6 and 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otsuki et al. in view of Ando et al.

Regarding claim 1, Otsuki et al. disclose an armature of an electric rotating machine comprising: an armature core (13 in Fig. 2) including plural divided cores (13a)

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arranged in a circumferential direction; a salient pole (13b) provided in each of the plural divided cores; a coil winding (15) wound around each salient pole. Otsuki et al. fail to show a convex winding configuration of the coil winding formed so as to project on an adjacent salient pole side over a boundary line between adjacent divided cores; and a concave winding configuration of the coil winding formed to be hollow from the boundary line so as not to interfere with the convex winding configuration.

However, Ando et al. disclose an armature core (22 in Fig. 2) of an electric rotating machine wherein a convex winding configuration of the coil winding formed so as to project on an adjacent salient pole side over a boundary line between adjacent cores; and a concave winding configuration of the coil winding formed to be hollow from the boundary line so as not to interfere with the convex winding configuration (Figs. 2, 4 and Col. 2, lines 10-23) for the purpose of increasing coil density (Col. 2, lines 6-9).

Since Otsuki et al. and Ando et al. are in the same field of endeavor, the purpose disclosed by Ando et al. would have been recognized in the pertinent art of Otsuki et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Otsuki et al. by forming a convex winding configuration of the coil winding formed so as to project on an adjacent salient pole side over a boundary line between adjacent divided cores; and a concave winding configuration of the coil winding formed to be hollow from the boundary line so as not to interfere with the convex winding configuration as taught by Ando et al. for the purpose of increasing coil density.

Regarding claim 9, it is noted tat all limitations of the claimed invention have been fulfilled by Otsuki et al. and Ando et al. as in claim 1.

Regarding claim 2, Otsuki et al. also disclose the armature for an electric rotating machine wherein the plural divided cores (13 in Fig. 2) are formed in a separated structure such that the plural divided cores are divided in the circumferential direction by each salient pole.

Regarding claim 3, Otsuki et al. disclose the armature for an electric rotating machine further comprising a laminated core (Fig. 3) which is formed of magnetic plates laminated in a thickness direction to form the plural divided cores. Otsuki et al. fail to show the convex winding configuration is projected over the boundary line which passes through abutting surfaces of the plural divided cores.

However, Ando et al. disclose an armature core (22 in Fig. 2) of an electric rotating machine wherein the convex winding configuration is projected over the boundary line which passes through the line between adjacent stator poles for the purpose of improving winding density (Col. 1, lines 65-67).

Since Otsuki et al. and Ando et al. are in the same field of endeavor, the purpose disclosed by Ando et al. would have been recognized in the pertinent art of Otsuki et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Otsuki et al. by forming the convex winding configuration is projected over the boundary line which passes through abutting surfaces of the plural divided cores as taught by Ando et al. for the purpose of improving winding density.

Regarding claims 4 and 11, Ando et al. also disclose the armature for an electric rotating machine further comprising two types of winding configurations (52 and 53 in Fig. 4) of the coil winding which are alternately different from each other for every adjacent stator pole in the circumferential direction.

Regarding claims 5 and 12, Ando et al. also disclose the armature for an electric rotating machine wherein one of the two types of winding configurations of the coil winding (53 in Fig. 4) is formed such that the convex winding configuration of the coil winding is on an inner side and the concave winding configuration is on an outer side and the other of the two types of winding configurations of the coil winding (52) is formed such that the convex winding configuration of the coil winding is on the outer side and the concave winding configuration is on the inner side.

Regarding claims 6 and 13, Ando et al. also disclose the armature for an electric rotating machine wherein each coil winding is set to have a same number of turns for each of the plural stator poles (Col. 3, lines 7-12).

Regarding claim 8, Ando et al. also disclose the armature for an electric rotating machine wherein the boundary line (33 in Fig. 2) extends to both circumferential end positions which are respectively located at an equal angle from a center line of the salient pole on both sides in the circumferential direction, and the convex winding configuration projects on the adjacent divided core side over the boundary line and the concave winding configuration is hollow from the boundary line so as not to interfere with the convex winding configuration (Fig. 4).

Regarding claim 10, it is noted tat all limitations of the claimed invention have been fulfilled by Otsuki et al. and Ando et al. as in claim 8.

4. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otsuki et al. in view of Ando et al. and further in view of Parshall.

Regarding claims 7 and 14, Otsuki et al. and Ando et al. show all limitations of the claimed invention except showing the armature for an electric rotating machine wherein a number of turns of the coil winding is alternately set to have a different number of turns for every adjacent divided core.

However, Parshall discloses a stator structure for an electric machine wherein a number of turns of the coil winding is alternately set to have a different number of turns for every adjacent stator pole (Fig. 2 and Col. 7, lines 32-37) for the purpose of reducing the size of the stator (Col. 1, lines 65-66).

Since Otsuki et al., Ando et al. and Parshall are in the same field of endeavor, the purpose disclosed by Parshall would have been recognized in the pertinent art of Otsuki et al. and Ando et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Otsuki et al. and Ando et al. by forming the armature for an electric rotating machine wherein a number of turns of the coil winding is alternately set to have a different number of turns for every adjacent divided core as taught by Parshall for the purpose of reducing the size of the stator.

Conclusion

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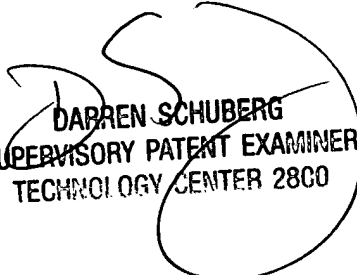
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh N Nguyen whose telephone number is (571) 272-2031. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg, can be reached on (571) 272-2044. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and (571) 273-8300 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

HNN

September 26, 2005


DARREN SCHUBERG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800